

CLAIMS

What Is Claimed Is:

1. A method performed by an implantable cardiac stimulation
5 device for analyzing a cardiac signal to generate information
representative of the characteristics of R-waves and T-waves found
therein, the method comprising:
 sensing a cardiac signal;
 identifying pairs of consecutive R-waves and T-waves within
10 the cardiac signal;
 measuring values representative of characteristics of pairs
of R-waves and T-waves;
 generating statistical information representative of the
measured values, the statistical information including an average
15 of each measured value; and
 storing the statistical information generated for the
measured values.
2. The method of claim 1 further comprising:
20 sensing additional cardiac signals;
 identifying R-waves in the additional cardiac signals and
then applying the stored averaged values to identify expected
locations and durations of T-waves within the additional cardiac
signals; and
25 blanking portions of an atrial channel of the additional
cardiac signals to ignore signals occurring within a period of time
corresponding to the expected locations and durations of T-waves.

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3. The method of claim 2 further comprising:

identifying an additional pair of consecutive R-waves and
T-waves within the additional cardiac signals;

measuring values representative of characteristics of the
5 additional pair of R-waves and T-waves;

determining an amount of variation between the measured
values of the additional pair of R-waves and T-waves and the
average of the measured values of previously identified pairs; and

determining whether the amount of variation exceeds a
10 predetermined threshold of variation and, if not, updating the
statistics to reflect the measured values of the additional pair of
R-waves and T-waves.

4. The method of claim 3 wherein the amount of variation
15 includes one or more of variation in an amplitude of the T-waves,
variation in an amplitude of the R-waves, variation in a time delay
between R-waves and corresponding T-waves, variation in a duration of
individual R-waves, and variation in a duration of individual T-waves.

20 5. A system for locating T-waves within a cardiac signal using
an implantable cardiac stimulation device, the system comprising:

means for sensing a cardiac signal;

means for determining an average time delay between
25 consecutive R-waves and T-waves within a first portion of the
cardiac signal;

means for determining average durations of the T-waves
within the first portion of the cardiac signal; and

means for identifying R-waves in a second portion of the
cardiac signal and then applying the average time delay and
30 average T-wave duration to identify expected locations and

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durations of subsequent T-waves within the second portion of the cardiac signal.

6. The system of claim 5 further comprising:

5 means for blanking portions of an atrial channel of the second portion of the cardiac signal to ignore signals occurring within a period of time corresponding to the expected locations and durations of the T-waves.

10 7. A system for locating T-waves within a cardiac signal using an implantable cardiac stimulation device, the system comprising:
a sensor operative to sense a cardiac signal;
a controller operative to determine an average time delay
15 between consecutive R-waves and T-waves within a first portion of the cardiac signal, to locate individual R-waves in a second portion of the cardiac signal, and then, for each R-wave found in the second portion of the cardiac signal, to identify an expected location of a subsequent T-wave using the average time delay.

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